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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,569	04/23/2001	Timothy M. Moore	206190	2994

38887 7590 02/16/2005

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EXAMINER

LIN, WEN TAI

ART UNIT PAPER NUMBER

2154

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/840,569

Applicant(s)

MOORE ET AL.

Examiner

Wen-Tai Lin

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-29, 31 is/are rejected.
- 7) ☒ Claim(s) 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 18-31 are presented for examination. Claims 1-17 have been canceled and claims 22-31 are newly added.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

- a. Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 18-19 are rejected under 35 U.S.C. 101 because the claimed invention as a whole does not produce a "useful, concrete and tangible" result to have a practical application. Specifically, the claim languages simply assign the connectivity type of a network interface to one of four connectivity categories without showing further use of the connectivity information does not satisfy the useful result aspect of the practical application requirement (see MPEM §2106 and *Arrhythmia*, 958 F.2d at 1057, 22 USPQ2d at 1036.) Furthermore, the claimed subject matter does not necessarily engage computing software and hardware to perform the job because the method steps may be performed manually using certain pre-stored computer information. For example, the operator of a home network may check the connectivity of a host device by reading cached configuration file and other relevant hardware statuses (such as

Art Unit: 2154

wires (gateway) connecting to a remote ISP etc.) to determine the host device's connectivity.

Claim Rejections - 35 USC § 103

6. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pulsipher et al.(hereafter "Pulsipher")[U.S. Pat. No. 5948055] in view of Official Notice.

7. As to claims 20-21, Pulsipher teaches an internet monitoring system for discovering the topology of network by utilizing a distributed object model, wherein each topology manager tracks connectivity statuses of objects representing nodes, interfaces, physical cables, logical IP network, etc. [col.9, line 56 – col.10, line 25]. Pulsipher does not specifically teach the detailed steps in the process of establishing an Internet connection session between a local and a remote stations. However, Official Notice is taken that it is well known in the art that to establish an internet connection session to a remote node from a local area network the local node must have a valid IP address (e.g., temporarily assigned by an ISP or local server); there must be a gateway connecting between the local area network and the remote network [e.g., Fig.6 of Pulsipher]; the domain name of the remote node must be resolvable via a designated domain name server; and ultimately, the domain name of the remote node must be actually resolved through the designated domain name server (i.e., a specific name server must be locally available and able to obtain the unique IP address of the remote

node). Since Pulsipher's topology manager collects/tracks the various objects distributed over the internet, it is obvious that Pulsipher's topology manager have gone through the aforementioned connectivity checking steps prior to connecting to each of the target nodes.

8. Claims 22-23, 25-28 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rangarajan et al (hereafter "Rangarajan") [U.S. Pat. No. 5845081].

9. As to claims 22-23 and 25-26, Rangarajan teaches substantially the same invention including a method for providing network connectivity information to an application running on a computing device, the method comprising:

applying a first set of discovery techniques [e.g., 103, Fig.1] to discover aspects of a first network [e.g., 150, Fig.1] to which the computing device is connected; and

applying a second set of discovery techniques [e.g., 102, Fig.1] to discover aspects of a second network [e.g., 160, Fig.1] to which the computing device is connected, the first and second sets of discovery techniques differing, at least in part [col.7, lines 38-54],

wherein the collected information includes connectivity to the internet [note that this is inherent because Rangarajan's IP discovery technique applies to the IP network]; and the topology manager is notified when discovered aspect of the IP network (i.e., the first network) changes [Rangarajan: Abstract].

Art Unit: 2154

Rangarajan does not specifically teach providing discovered aspects of the first and second networks to the application via a common application programming interface.

However, it is well known in the art that APIs are subroutines written for just about every type of software program (e.g., operating systems, utility programs and communication protocol handling) that needs to communicate with external programs.

It would have been obvious to one of ordinary skill in the art to use common API to collect the discovered aspect of the networks to Rangarajan's application because API is a standard programming technique making it easier for programmers to develop applications.

10. As to claims 27 and 31, Rangarajan teaches substantially as claimed including a method for providing network connectivity information to an application running on a computing device, the method comprising:

gaining connectivity to a network;

discovering aspects of the network;

associating a first name with the network, the first name unique within the context of the computing device [e.g., col.1, lines 50-63; i.e., the first network name is associated with the protocol name of the network];

providing the first name to the application as a key for accessing the discovered aspects of the network [Abstract; col.1, lines 50-63; Note that the above steps are nominal steps when discovering nodes attached to a network].

Art Unit: 2154

Rangarajan does not specifically teaches the situation of losing connectivity to the network, regaining connectivity, rediscovering aspect of the network and name the network to the first name.

However, it is well known in the art a network topology needs to be updated/rediscovered from time to time so as to keep the node connectivity and other information up-to-date. This is nominally performed at a different connection session, which requires the steps of regaining connectivity to the network and perform rediscovering aspects of the network. Furthermore, since Rangarajan teaches that the network is associated with the protocol name it uses [col.1, lines 50-63], it is obvious that the rediscovered network name would be using the same name as previously used.

11. As to claim 28, since Rangarajan teaches that the network name is based on the protocol name, it is clear that a protocol name such as 802.1X (which is from the set as specified in the claim) could be used as a network identity string.

12. Claim 24 is rejected under U.S.C. 103(a) as being unpatentable over Rangarajan et al (hereafter "Rangarajan") [U.S. Pat. No. 5845081], as applied to claims 22-23, 25-28 and 31 above, further in view of Pulsipher et al. (hereafter "Pulsipher") [U.S. Pat. No. 5948055].

13. As to claim 24, Rangarajan does not specifically teach that the connectivity type is selected from the set of: ad hoc, managed, unmanaged, and unknown.

Art Unit: 2154

However, in the same field of endeavor Pulsipher teaches that the status of a network object (such as a computer, a network subnet, or a segment) may be identified as managed, unmanaged or unknown [col.32, lines 41-47; col.22, lines 37-50]. As to the "ad hoc" status (which means a standalone network), it is obvious that Pulsipher's services could also be applied to a network that is not connected to any other network.

It would have been obvious to one of ordinary skill in the art that Rangarajan's network object could use the similar categorization because by doing so it would facilitate Rangarajan's topology information management.

14. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rangarajan et al (hereafter "Rangarajan") [U.S. Pat. No. 5845081], as applied to claims 22-26 above, further in view of Matsuda et al.(hereafter "Matsuda") [U.S. PGPub 20020133573].

15. As to claim 29, Rangarajan teaches that a network's information could be obtained via a device remote having access to the network but using a different protocol.

Rangarajan does not specifically teach a network so discovered would associate its name with the device through which the network may be accessed.

However, Matsuda teaches a method of associating a network device's MAC address (which is globally unique) as basis for uniquely identifying the device in the network. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have also correlate Rangarajan's network name (which is based

Art Unit: 2154

on the protocol name) accordance with the name of a device's network interface through which the network may be accessed because by doing so the device's MAC address could be used for resolving conflicts in the network names.

16. Claim 30 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

17. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 days from the mail date of this letter. Failure to respond within the period for response will result in ABANDONMENT of the application (see 35 U.S.C. 133, M.P.E.P. 710.02, 710.02(b)).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Tai Lin whose telephone number is (571) 272-3969. The examiner can normally be reached on Monday-Friday(8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (703)305-8498. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

(703)872-9306 for official communications; and

(703)746-5516 for status inquires draft communication.

Art Unit: 2154

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Wen-Tai Lin

February 14, 2005

Wen-Tai Lin
2/14/05